



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,260	04/21/2004	Kei Sakagami	040189	4848
23850 7590 08/20/2008 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005				
EXAMINER				
BLAIR, KILE O				
ART UNIT		PAPER NUMBER		
2615				
MAIL DATE		DELIVERY MODE		
08/20/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/828,260

Applicant(s)

SAKAGAMI, KEI

Examiner

Kile O. Blair

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 7/2/08

DETAILED ACTION

This Office action is in response to the communication filed on 7/3/2008.
Currently Amended claims 1, 10, 12, and 13; and Original claims 2, 5-9, and 11 are pending. Claims 3 and 4 are canceled.

Claim Rejections - 35 USC § 112

Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "same transmission system" in claim 5 is indefinite. Claim 6 is rejected for dependency on claim 5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5, 6, 8, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomohiko (JP Pub. No. 11-262081) in view of Goldberg et al. (US Pub. No. 2005/0160270 A1).

Regarding claim 1, Tomohiko teaches an audio data processing device for reproducing multichannel (outputs the voice of two or more channels, Tomohiko, [0001])

audio data from a at least one first speaker connected by way of wiring and at least one second speaker located around a reference point (acoustic waves transmitted to hearing point from two or three speakers, Tomohiko [0003]), the device comprising: an audio data acquiring section for acquiring the audio data (audio equipment 100, Tomohiko [0016], Fig. 1, 100) and a delay processor (delay machines 10,12, and 14 [0016]) for selectively delaying audio data transmitted to the first speaker in a wired transmission system out of the audio data of channels respectively corresponding to the speakers on the basis of a time (are in agreement, [0005]) until the audio data transmitted to the second speaker is reproduced from the second speaker (the acoustic waves are in agreement {i.e. arrive at the same time} at the hearing point, [0003]), wherein the delay processor delays the audio data based on a difference between: a first locating distance from the reference point to the first speaker; and the total distance of a sound travel distance corresponding to a time necessary for modulating and demodulating the audio data transmitted to the second speaker and a second locating distance from the reference point to the second speaker (A setup of a time delay with a high precision which considered the class of not only the difference of the distance of each loudspeaker and a sound-collecting means but loudspeaker and the difference of a wire length especially is attained, Tomohiko, [0009]; and until the corresponding acoustic wave of each frequency component arrives at a listening location should take into consideration not only the difference by the difference of the distance from each loudspeaker to a listening location but the difference of time amount after an audio

signal is inputted into each loudspeaker until an acoustic wave is emitted, Tomohiko, [0007]).

Although Tomohiko does not explicitly teach the feature wherein the at least one second speaker is connected by way of radio medium or wireless transmission system and wherein audio data is delayed based on a time necessary for modulating and demodulating the audio data transmitted to the second speaker in the wireless transmission system, Goldberg et al. teaches a wireless speaker system that can incorporate a time delay in the audio output to mitigate for wireless transmission delays and provide synchrony between audio outputs (Goldberg et al., [0219]). It would have been obvious to one of ordinary skill in the art to use the wireless transmission mitigation methods disclosed by Goldberg et al. with the speaker system of Tomohiko since it is a combination of known elements with each element performing the same function it had been known to perform and the combination yields predictable results.

Regarding claim 2, Tomohiko in view of Goldberg et al. teaches the audio data processing device according to claim 1, further comprising a transmitter that transmits the audio data as a digital signal to the second speaker in the wireless transmission system (the audio can be configured for wireless transmission including digital radio to wireless external speakers, Goldberg et al., [0104]).

Regarding claims 5 and 6, Tomohiko in view of Goldberg et al. teaches the audio data processing device according to claim 1, further comprising: a storage that stores the audio data so that the delay processor delays the audio data, wherein the storage has a data area having the same size as a standard data area that is used when a

same transmission system is applied to the speakers, and a delay time of the first speaker is assigned to the data area, and wherein the delay processor delays the audio data based on either the data area or the standard data area (memory which stores audio data in time interval while delaying and delays based on the memory, Tomohiko, [0040]).

Regarding claim 8, Tomohiko in view of Goldberg et al. teaches the audio data processing device according to claim 1, further comprising: a connection detector for detecting that the speaker is connected in the wired transmission system so that the audio data can be acquired, wherein the delay processor delays the audio data transmitted based on the connection status of the respective speakers detected by the connection detector (a time delay stimulus signal is inputted into each loudspeaker, a corresponding acoustic wave is emitted in sound space, the sound-collecting means of a listening location detects this, a time delay is surveyed, the time delay of each delay means is set up based on this observation result, and a setup of an exact time delay is attained, Tomohiko, [0060]).

Claims 10, 12 and 13 are substantially similar to claim 1 and are rejected for the same reasons.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomohiko in view of Goldberg et al. in further view of Statham et al. (US Pat. No. 5,768,399) and in further view of Lavoie et al. (US Pub. No. 2001/0038702 A1).

Regarding claim 7, Tomohiko in view of Goldberg et al. teaches the audio data processing device according to claim 1.

Although Tomohiko in view of Goldberg et al. does not explicitly teach the feature wherein the first speaker represents a center speaker located at the front relative to an audience, a right front speaker located at the front right side and a left front speaker located at the front left side, and the second speaker denotes a right rear speaker located at the rear right side relative to the audience and a left rear speaker located at the rear left side, Statham et al. teaches a set of front speakers (center, right, and left) and a wireless rear speaker (Statham et al., col. 3, lines 40-56, Fig. 1A) and Lavoie et al. teaches a five channel surround system (Lavoie et al., [0032], Fig. 1) with a set of front speakers (center, right, and left) and two rear speakers (right and left). IT would have been obvious to one of ordinary skill in the art to use the five channel surround sound configuration of Lavoie et al. with the wireless rear surround speaker of Statham et al. together in the device of Tomohiko in view of Goldberg et al. since doing so is a combination of known elements that yields predictable results.

Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomohiko in view of Goldberg et al. in further view of Hooley et al. (US Pub No. 2004/0151325).

Regarding claim 9, Tomohiko in view of Goldberg et al. teaches the audio data processing device according to claim 1.

Although Tomohiko in view of Goldberg et al. does not explicitly teach the device of claim 1 further comprising: an image data acquiring section along with a display and an image delay processor.

Hooley et al. teaches an image data acquiring section for acquiring image data (source such as a DVD player, Hooley et al., [0178]); a display for reproducing the acquired image data; and an image data delay processor that delays, at transmission of the image data (screen means that receives signals from video delay means, Hooley et al. [0178]), the image data by a time corresponding to a maximum delay time of the audio data delayed by the delay processor (the video is delayed with reference to the greatest distance traveled by a sound beam and can further be delayed to match the audio based on processing delays in the audio, Hooley et al., [0178]).

Although the system of Tomohiko and the wireless speakers of Goldberg et al. do not teach the feature of delaying a video in order to synchronize with the sound output at a reference point as required, Hooley et al. teaches a video delays means that delays the video output based on the greatest distance traveled by the sound and also a further delays component is taught where the video may be delayed further in order to compensate for processing delays which could also be used by one of ordinary skill in the art to compensate for wireless transmission delays. It would have been obvious for one of ordinary skill in the art to combine the video delays means of Hooley et al. with the system of Tomohiko and the wireless speakers of Goldberg et al. with the motivation of having a means of adjusting a system that can already delay an audio signal to delay video signal would have been obvious to one of ordinary skill in the art in view of the

apparatus of Hooley et al. and with the suggestion by Goldberg et al ([0353]) that the audio system using wireless speakers can also be used with video.

Claim 11 is rejected for the same reasons as claim 9.

Response to Arguments

Applicant's arguments with respect to claims 1, 2, and 5-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kile O. Blair whose telephone number is (571) 270-3544. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KB

/Suhan Ni/
Primary Examiner, Art Unit 2614